

Patent Claims

1. Honeycomb seal, in particular to seal a radial gap between a rotor and stator of a gas turbine, **characterized in that** the honeycomb seal is manufactured by powder metallurgical injection molding.
2. Honeycomb seal according to Claim 1, **characterized in that** said honeycomb seal is composed of several segments, wherein the segments are embodied as a single piece and have a base element (12, 16, 21) as well as honeycomb elements (13, 17, 22), and wherein the base element (12, 16, 21) bears the honeycomb elements (13, 17, 22).
3. Honeycomb seal according to Claim 2, **characterized in that** the segments are manufactured by powder metallurgical injection molding.
4. Honeycomb seal according to Claim 2 or 3, **characterized in that** the segments of the honeycomb seal (10, 15, 20) can be connected to a supporting structure (11, 19, 23), wherein the segments and the supporting structure (11, 19, 23) are preferably manufactured of different materials.
5. Honeycomb seal according to Claim 4, **characterized in that** the base elements (12, 16, 21) of the segments feature at least one guide section (14, 18, 24), wherein the segments can be connected to a supporting structure (11, 19, 23) via the or each guide segment (14, 18, 24), and wherein the segments are interlocked with each other in such a way that a segment engages with a projection in a corresponding recess of an adjacent segment.
6. Honeycomb seal, in particular to seal a radial gap between a rotor and stator of a gas turbine, **characterized in that** the honeycomb seal has a base element (12, 16, 21) and honeycomb elements (13, 17, 22) that are embodied as a single piece with the base element (12, 16, 21).
7. Honeycomb seal according to Claim 6, **characterized in that** the honeycomb seal is composed of several segments, wherein each segment has a base

element (12, 16, 21) and honeycomb elements (13, 17, 22) that are embodied as a single piece with the base element (12, 16, 21).

8. Honeycomb seal according to Claim 7, **characterized in that** the base element (12, 16, 21) of the or each segment (14, 18, 24) features at least one guide section (14, 18, 24), wherein the or each segment can be connected to a supporting structure (11, 19, 23) via the or each guide section (14, 18, 24).
9. Honeycomb seal according to Claim 7 or 8, **characterized in that** the ends of the segments have projections (26) and/or recesses (25) such that a segment engages with a projection (26) in a corresponding recess (25) of an adjacent segment.
10. Honeycomb seal according to Claim 9, **characterized in that** the segments of the honeycomb seal and the supporting structure are manufactured of different materials.
11. Honeycomb seal according to one or more of Claims 6 through 10, **characterized in that** the segments of the honeycomb seal (10, 15, 20) are manufactured by powder metallurgical injection molding.
12. Honeycomb seal according to one or more of Claims 4 or 5 and 8 through 11, **characterized in that** the honeycomb seal (10, 15, 20) and the supporting structure (11, 19, 23) are manufactured as a single piece.

13. Honeycomb seal according to one or more of the preceding claims,
characterized in that the to-be-sealed gap lies between the rotating moving blades of the rotor and a housing as a stator or the non-rotating guide blades of the stator and the rotor.
14. Honeycomb seal according to one or more of Claims 2 through 5 and 7 through 13, **characterized in that** the honeycomb element (13, 17, 22) and the base element (12, 16, 21) are composed of different materials.